**Second Grade Insect Research**

**Reading Research Lab (RRL) Project**

**Overview of Lesson:**

In our Title 1 elementary school, students are required to complete a Reading Research Lab (RRL) project. Instead of second graders using only library books and completing pencil and paper research and drawing and writing to create a book, we will incorporate technology into this project. Students will learn that insects are characterized by the process of metamorphosis and by having three main body parts; six legs; an exoskeleton; a pair of antennae; two compound eyes; zero to two pairs of wings as an adult. Second graders will begin with the familiar, library books, and proceed to the new, Internet lists on Diigo. Similarly, they will begin with Powerpoint (familiar) and use the new tool (VoiceThread). Students will import the Powerpoint to VoiceThread and learn how to record narration. In addition students will use Twitter, Skype, Flickr and Youtube to enhance their learning and understanding. This research is the collaborative effort of the classroom teacher, librarian and technology teacher. The Wiki serves as the container for the resources for all teachers to use.

**Integrated Standards and Indicators**

* **AASL 21st Century Standards**

***1 – Inquire, think critically and gain knowledge***

1.1.4 Find, evaluate, and select appropriate sources to answer questions.

**1.1.6** Read, view, and listen for information presented in any format (e.g., textual, visual, media, digital) in order to make inferences and gather meaning.

1.3.3 Follow ethical and legal guidelines in gathering and using information.

*2 -* ***Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.***

2.1.2 Organize knowledge so that it is useful.

2.1.4 Use technology and other information tools to analyze and organize information.

2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.

2.2.4 Demonstrate personal productivity by completing products to express learning.

***3 - Share knowledge and participate ethically and productively as members of our democratic society.***

3.1.3 Use writing and speaking skills to communicate new understandings effectively.

3.1.4 Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use, and assess.

3.1.6 Use information and technology ethically and responsibly.

* **Local/State Standards and Indicators**

**Common Core – Reading Informational Text – Grade 2 RI1**

Demonstrate understanding orally or in writing after reading, viewing, or listening to a text.

* **Content Standards**

**School Library State Curriculum Goal 5.0 Share Findings/Conclusions:**

**Students will be able to follow an inquiry process to share findings/conclusions in an appropriate format to support written, oral, and multimedia information products and evaluate the products and the processes in an ethical manner.**

1. Use a variety of formats to prepare the findings/conclusions of the information need for sharing.

a. With guidance, organize and display findings/conclusions in a variety of formats, including the use of technology.

* **Technology Standards**

***NETS-S (3) Research and Information Fluency***

Students apply digital tools to gather, evaluate, and use information.

**Essential Question(s):**

What are the characteristics of insects?

What do insects eat?

What animals are insects prey for?

What is the life cycle of insects?

Where do insects live?

What’s fascinating about insects?

How can we organize and present our new knowledge to others?

**Desired Outcomes:**

Students will be able to create a Voicethread product in order to share their knowledge of insects with others.

**Estimated Time:** 3-4 weeks with classroom teacher collaboration

**Student Resources (Materials and Technology):**

Library books, Powerpoint template, Skype, Twitter, Voicethread, Diigo list of insect sites, Flickr pictures, Youtube video

**Provisions for Differentiation and Learning Styles:**

Visual learners – books, internet sites, voicethread, flickr

Auditory learners – internet sites, voicethread, skype, songs

Musical, rhythmic learners – video, songs

Verbal learners – voicethread, skype

Kinesthetic learners – internet games, making insects

Logical organization – powerpoint template, diigo

Intrapersonal – powerpoint, books, internet

Interpersonal – diigo, skype, twitter, voicethread

**Instructional Plan:**

* **Engagement/Motivation (interest hook)**

Teacher will show the students insect photographs using a Flickr gallery. Students and teachers will discuss.

Students will view the video *Icky Insects* by Silly Bus.

* **Pre-Assessment of Prior Knowledge**

Teacher and students will complete the K and W of the KWL chart on the promethean board. Chart will be saved to refer to throughout research. Students will brainstorm insects and choose one to research independently.

* **Direct Instruction**
* Classroom teacher will show students the powerpoint template and discuss the information that needs to be gathered when researching. **(model)**
* Librarian will **model** how to make a personal list of books using Destiny. Students will make a list and check out books to use for their research. Teacher will **model** gathering information from books for insect research. Students will **independently** use sticky notes in books to organize their research. (1.1.4, 1.1.6)
* Technology teacher will **model** how to use sticky notes and comments on internet sites using diigo. Following the gradual release model, students will practice using the features of diigo. Students will **independently** create sticky notes and comments on sites specific to their insect. (1.1.4, 1.1.6, 2.1.4)
* Students will be given time in the computer lab to use sites on diigo to play games and listen to songs in order to practice and reinforce insect learning. By building a bug, they are reinforcing the information learned about parts of insects. **(independent practice)**
* *During the weeks of research, students will be allowed to go to the library in pairs and use Twitter to tweet a “did you know” insect fact.* (2.1.6)
* Classroom teacher will **model** a completed powerpoint. Teacher will **model** how to add student research to the powerpoint template. Students will work **independently** to add their research to a powerpoint presentation. (2.1.2)
* Technology teacher will instruct students on how to locate, copy and paste pictures into the powerpoint presentation **(model)**. Teacher and students will work together **(guided practice)** to locate pictures for the first 2 slides. Students will **independently** add pictures that match the text to the presentation. (1.3.3, 3.1.6)
* Librarian will teach students that an entomologist is a person who scientifically studies insects. “Where do we go if we still have more questions when researching? We contact an expert. Today we will be skyping with Mrs. Lawless, an entomologist.” Students will brainstorm questions they are curious about. Students will participate in a skype session with an entomologist. (3.1.3)
* Technology teacher will **model** a completed voicethread of insect research. Teacher will allow students to individually comment  **(guided practice)** on the model voicethread slides.
* Through **modeling and guided practice**, as a group students will follow the teacher’s step by step instructions to upload their powerpoint to voicethread.
* Students will **independently** use headphones with microphone in order to record the narration for each slide of their voicethread production. (2.2.4, 2.1.6, 3.1.3, 3.1.4)
* Teacher will provide a computer station during literacy centers so that students can view each other’s voicethread productions and make comments. **(independent practice)** (1.3.3, 3.1.3, 3.1.4)

**Assessment:**

Students will be assessed informally as they complete the steps of the research process.

Teacher will provide assistance and informal assessment during the process by monitoring information on sticky notes in library books and diigo sites.

Students will be informally assessed using the Twitter checklist. (Checklist is on the Wiki.)

Students will work with partners and utilize the Powerpoint checklist to assess their own product. (Checkllist is on the Wiki.)

Students will be formally assessed using a rubric for both the Powerpoint and Voicethread products. (Rubrics are on the Wiki.)

**Suggested Modifications:**

* Students would be allowed to work as partners if they had difficulty gathering information from books or internet sites
* Students researching the same insect could collaborate before organizing information in powerpoint.
* Collaboration with classroom teacher must occur before beginning this research. Classroom teacher should find the Wiki very useful since all resources will be in one place.
* Collaborate with PE teacher to hold insect Olympics in the gym.
* Collaborate with music teacher for insect song and dance.
* Collaborate with art teacher for an insect related art project.
* An additional resource for teachers – www.kathimitchell,com/insects.html